

SATAKE

10/606,490

4,147,546  
4,749,644  
4,762,773  
6175

priority (submitted) on 06/06/03 50  
08/09/2002

What is claimed is:

1. A one-part photographic developing concentrate comprising:

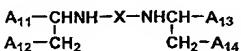
(1-4) concentrate (i) a paraphenylenediamine color developing agent; and  
(ii) a water-soluble organic solvent,

(5-8) method wherein a molar ratio of sodium ion to potassium ion is at least 3, and a molar ratio of sulfate ion to carbonate ion is at least 0.25.

2. The one-part photographic developing concentrate of claim 1, wherein the developing concentrate does not comprise any other cations than sodium ion.

3. The one-part photographic developing concentrate of page 19 claim 1, wherein a compound represented by Formulas (A-I) to (A-IV) is further contained:

A-1-1 Formula (A-I)

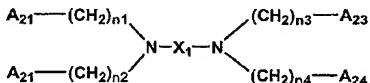


G413, 703 wherein  $\text{A}_{11}$ ,  $\text{A}_{12}$ ,  $\text{A}_{13}$  and  $\text{A}_{14}$ , which may be the same or different, each represents  $-\text{CH}_2\text{OH}$ ,  $-\text{PO}_3(\text{M}_6)$  or  $-\text{COOM}_7$ ;  $\text{M}_6$  and  $\text{M}_7$  each represents a hydrogen atom, an ammonium group, an

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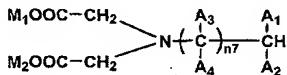
alkaline metal atom or an organic ammonium group; X represents an alkylene group having 2 to 6 carbon atoms or - $(B_1O)_n-B_2-$ ; n represents an integer of 1 to 6; and  $B_1$  and  $B_2$ , which may be the same or different, each represents an alkylene group having 1 to 5 carbon atoms,

Formula (A-II)



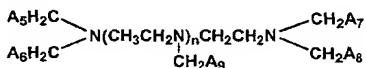
wherein  $A_{21}$ ,  $A_{22}$ ,  $A_{23}$  and  $A_{24}$ , which may be the same or different, each represents  $-CH_2OH$ ,  $-COOM^1$  or  $-PO_3(M^2)_2$ ;  $M^1$  and  $M^2$  each represents a hydrogen atom, an ammonium group, an alkaline metal or an organic ammonium group;  $X_1$  represents a straight or branched alkylene group having 2 to 6 carbon atoms, a saturated or unsaturated organic group which forms a ring, or  $-(B_{11}O)_{n5}-B_{12}-$ ;  $n5$  represents an integer of 1 - 6;  $B_{11}$  and  $B_{12}$ , which may be the same or different, each represents an alkylene group having 1 - 5 carbon atoms; and  $n1$ ,  $n2$ ,  $n3$  and  $n4$ , which may be the same or different, each represents an integer of not less than 1 and at least one of  $n1$ ,  $n2$ ,  $n3$  and  $n4$  is 2 or more,

### Formula (A-III)



wherein A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub> and A<sub>4</sub>, which may be the same or different, each represents a hydrogen atom, a hydroxyl group, -COOM<sub>3</sub>, -PO<sub>3</sub>(M<sub>4</sub>)<sub>2</sub>, -CH<sub>2</sub>COOM<sub>5</sub>, -CH<sub>2</sub>OH or a lower alkyl group, however, at least one of A<sub>1</sub> to A<sub>4</sub> represents -COOM<sub>3</sub>, -PO<sub>3</sub>(M<sub>4</sub>)<sub>2</sub>, or -COOM<sub>5</sub>; M<sub>1</sub>, M<sub>2</sub>, M<sub>3</sub>, M<sub>4</sub>, and M<sub>5</sub> each represents a hydrogen atom, an ammonium group, an alkaline metal atom or an organic ammonium group; and n<sub>7</sub> represents an integer of 0 to 2,

### Formula (A-IV)



wherein, A<sub>5</sub>, A<sub>6</sub>, A<sub>7</sub>, A<sub>8</sub> and A<sub>9</sub>, which may be the same or different, each represents -COOM<sub>3</sub> or -PO<sub>3</sub>M<sub>4</sub>M<sub>5</sub>; M<sub>3</sub>, M<sub>4</sub> and M<sub>5</sub>, which may be the same or different, each represents a hydrogen atom or an alkaline metal atom; and n represents an integer of 1 or 2.

4. The one-part photographic developing concentrate of claim 1, wherein the developing concentrate does not comprise a fluorescent whitening agent.

5. A method for processing a silver halide color photographic material, comprising the steps of:

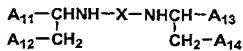
imagewise irradiating the photographic material;  
developing the irradiated photographic material in a developing solution which is prepared by diluting a volume of the developing concentrate of claim 1 with water having a volume of at least 3 times of the volume of the developing concentrate; and then

desilvering the developed photographic material.

6. The method for processing a silver halide color of photographic material of claim 5, wherein the developing solution is prepared by diluting the developing concentrate which does not comprise any other cations than sodium ion.

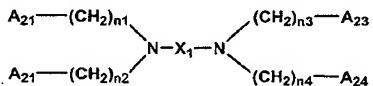
7. The method for processing a silver halide color of photographic material of claim 5, wherein the developing solution is prepared by diluting the developing concentrate containing a compound represented by Formulas (A-I) to (A-IV):

Formula (A-I)



wherein A<sub>11</sub>, A<sub>12</sub>, A<sub>13</sub> and A<sub>14</sub>, which may be the same or different, each represents -CH<sub>2</sub>OH, -PO<sub>3</sub>(M<sub>6</sub>) or -COOM<sub>7</sub>; M<sub>6</sub> and M<sub>7</sub>, each represents a hydrogen atom, an ammonium group, an alkaline metal atom or an organic ammonium group; X represents an alkylene group having 2 to 6 carbon atoms or -(B<sub>1</sub>O)<sub>n</sub>-B<sub>2</sub>-; n represents an integer of 1 to 6; and B<sub>1</sub> and B<sub>2</sub>, which may be the same or different, each represents an alkylene group having 1 to 5 carbon atoms,

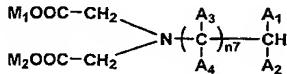
Formula (A-II)



wherein A<sub>21</sub>, A<sub>22</sub>, A<sub>23</sub> and A<sub>24</sub>, which may be the same or different, each represents -CH<sub>2</sub>OH, -COOM<sup>1</sup> or -PO<sub>3</sub>(M<sup>2</sup>)<sub>2</sub>; M<sup>1</sup> and M<sup>2</sup> each represents a hydrogen atom, an ammonium group, an alkaline metal or an organic ammonium group; X<sub>1</sub> represents a straight or branched alkylene group having 2 to 6 carbon atoms, a saturated or unsaturated organic group which forms a ring, or -(B<sub>11</sub>O)<sub>n5</sub>-B<sub>12</sub>-; n5 represents an integer of 1 - 6; B<sub>11</sub> and B<sub>12</sub>, which may be the same or different, each represents an alkylene group having 1 - 5 carbon atoms; and n1, n2, n3 and n4 ,which may be the same or different, each represents

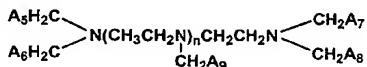
an integer of not less than 1 and at least one of n1, n2, n3 and n4 is 2 or more,

Formula (A-III)



wherein A<sub>1</sub>, A<sub>2</sub>, A<sub>3</sub> and A<sub>4</sub>, which may be the same or different, each represents a hydrogen atom, a hydroxyl group, -COOM<sub>3</sub>, -PO<sub>3</sub>(M<sub>4</sub>)<sub>2</sub>, -CH<sub>2</sub>COOM<sub>5</sub>, -CH<sub>2</sub>OH or a lower alkyl group, however, at least one of A<sub>1</sub> to A<sub>4</sub> represents -COOM<sub>3</sub>, -PO<sub>3</sub>(M<sub>4</sub>)<sub>2</sub>, or -COOM<sub>5</sub>; M<sub>1</sub>, M<sub>2</sub>, M<sub>3</sub>, M<sub>4</sub>, and M<sub>5</sub> each represents a hydrogen atom, an ammonium group, an alkaline metal atom or an organic ammonium group; and n<sub>7</sub> represents an integer of 0 to 2,

Formula (A-IV)



wherein, A<sub>5</sub>, A<sub>6</sub>, A<sub>7</sub>, A<sub>8</sub> and A<sub>9</sub>, which may be the same or different, each represents -COOM<sub>3</sub> or -PO<sub>3</sub>M<sub>4</sub>M<sub>5</sub>; M<sub>3</sub>, M<sub>4</sub> and M<sub>5</sub>, which may be the same or different, each represents a hydrogen atom or an alkaline metal atom; and n represents an integer of 1 or 2.

8. The method for processing a silver halide color of photographic material of claim 5, wherein the developing

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solution is prepared by diluting the developing concentrate  
which does not comprise a fluorescent whitening agent.